

CLAIMS

What is claimed is:

1. A satellite phone repeater, comprising:
a plurality of antennas; and
a plurality of receiver/transmitters coupled to the antennas;
wherein at least one of the antennas is configured to communicate with a plurality of handsets simultaneously and, through the repeater, the handsets can communicate with an orbiting satellite.
2. The satellite phone repeater of claim 1 wherein one antenna permits communications to be transmitted to the handsets and another antenna permits communications to be received from the handsets.
3. The satellite phone repeater of claim 1 further comprising a phase shifter coupled to at least one antenna.
4. The satellite phone repeater of claim 3 further comprising a phase shift controller coupled to the phase shifter, said phase shift controller configured to cause the phase shifter to vary phase of a signal to or from an antenna at a rate that is faster than a response time of a receiver/transmitter yet slow enough so as not to change modulation of the signal.

5. The satellite phone repeater of claim 1 further comprising a switch coupled to at least two receiver/transmitters, said switch selectively coupling each of the two receiver/transmitters to a satellite antenna, said satellite antenna being the only antenna used by the two receiver/transmitters to communicate with the satellite.

6. An electronics device, comprising:

means for communicating via a direct line of sight link to an orbiting satellite;

means for simultaneously communicating with a plurality of satellite phones;

means for amplifying signals received from said satellite that target said satellite phones; and

means for amplifying signals received from said satellite phones that target said satellite.

7. The electronics device of claim 6 further comprising means varying phase of at least one of the signals.

8. A method, comprising:

receiving signals from a plurality of handsets;

amplifying said signals to produce first amplified signals; and

transmitting said first amplified signals to an orbiting satellite.

9. The method of claim 8 further comprising varying phase of the signals received from the plurality of handsets.

10. The method of claim 8 further comprising:
receiving signals from an orbiting satellite;
amplifying said signals received from the satellite to produce second amplified signals; and
transmitting said second amplified signals to one or more handsets.
11. The method of claim 10 further comprising varying phase of the signals received from the satellite.
12. The method of claim 10 further comprising selectively coupling each of two communication paths to a single antenna adapted to communicate with the satellite.
13. A repeater, comprising:
a first antenna configured to receive first signals from a plurality of satellite communication handsets;
a second antenna configured to transmit second signals to said handsets;
a third antenna configured to communicate with a satellite;
a first receiver/transmitter coupled to the first antenna;
a second receiver/transmitter coupled to the second antenna;
wherein at least one of the antennas is configured to communicate with a plurality of handsets and, through the repeater, the handsets can communicate with a satellite.

14. The repeater of claim 13 further comprising an electronic switch coupled to the third antenna and the first and second receiver/transmitters, said switch sequentially couples each of the first and second receiver/transmitters to the third antenna so that the repeater includes only a single antenna to communicate with the satellite.

15. The repeater of claim 14 further comprising a first phase shifter coupled to the first receiver/transmitter and the first antenna and a second phase shifter coupled to the second receiver/transmitter and the second antenna, said first and second phase shifters configured to vary the phase of signals passing to the first antenna and received from the second antenna.

16. The repeater of claim 15 further comprising a phase shift controller coupled to the first and second phase shifters, said phase shift controller configured to cause the phase shifters to vary the phase at a frequency of y Hz and between a phase shift of about 0 degrees and about m degrees, wherein y is between about 1 Hz and about 25 Hz and m is between about 90 degrees and about 180 degrees.

17. The repeater of claim 13 further comprising a first phase shifter coupled to the first receiver/transmitter and the first antenna and a second phase shifter coupled to the second receiver/transmitter and the second antenna, said first and second phase shifters configured to vary the phase of signals passing to the first antenna and received from the second antenna.